

Charge to the Delta Science Program Independent Review Panel for the Feasibility Study of Shore-Based Ballast Water Reception and Treatment Facilities in California

Orientation and Focus

The intent of this project is to create a report assessing the feasibility of using shore-based ballast water reception and treatment facilities at California ports for vessels to meet California's interim performance standards for the discharge of ballast water. The report shall be based on verified, substantiated data and documents that are available to the public, and shall include detailed analyses (cost, logistics, etc.)

The study will culminate in the production of a report detailing the potential of this method to meet the needs of regulated vessels to comply with California's interim performance standards and will contribute to the understanding of a potentially broader and more effective range of treatment options. When completed, the study may suggest actions that could be taken to further improve the prevention of non-native species introductions via shipping vessels. This review will focus on an analysis of the draft reports submitted by the contractor.

Materials to be reviewed over the three workshops covering the entire study

Each independent review panel member will review the following documents (to be provided in electronic format) as they are submitted in draft form:

- a) Draft Literature Review Report.
- b) Draft Report on Task 2 through 5 report (technical memoranda) of findings and scaling considerations.
- c) Draft Final Report.

Scope of the Review and Analysis

The review and analysis shall address the following questions:

- Does the literature review report cover all pertinent information related to the feasibility of shorebased treatment facilities?
- Do the findings render adequate insights to understanding vessel types , treatment plants and facilities?

- Does the assessment of case studies provide adequate knowledge to assess feasibility of ballast water transfer, storage and treatment?
- Are site descriptions complete, are they representative of the range of port facilities in California, and do they contain the necessary information from which to evaluate the application of a given engineering solution and their potential of meeting California's interim standards?
- Are potential engineering solutions clearly defined and described?
- Are the evaluation criteria clearly defined and described?
- Are linkages between elements of the report clear?
- Is the report of sufficient robustness and scientific quality that it appropriately identifies and considers applicable technologies, economic implications, and considers applicable solutions?
- What, if any, additional engineering solutions should be considered?
- What, if any, additional evaluation criteria should be considered?

- Are the engineering solutions described in the report feasible to implement?
- Do the recommendations and implications fully answer questions related to feasibility of shorebased treatment facilities.
- If not, what needs to be considered to improve the feasibility analysis of the potential solutions?

Deliverables

The independent review panel will prepare the following deliverables:

- Written comments on the
 1. Draft literature review report and proposed case study locations
 2. Interim report on findings from Tasks 2 through 5
 3. Final draft report
- Attend two public workshops in Sacramento and provide verbal and written comments on the methodology to be used to guide and instruct the contractors. Including suggested alternatives or variations to the experimental design, and the rationale for the suggestions.
- Attend a third public workshop at a location yet to be determined and provide verbal and written comments on the final draft report
- Written responses to additional questions transmitted by the Delta Science Program.

Review Panel Membership

William (Bill) J. Cooper (Chair)
 Audrey D Levine (Lead)
 Christine M Moffitt
 Steven C. Hackett
 Rick Harkins

Public Meeting Format

The meetings will include presentations by key individuals from the the Glosten Associates team. Independent review panel members should be prepared to discuss any questions regarding the review materials with the Glosten team presenters at the meeting. The Lead Scientist or his designee will facilitate discussions. The panel will

have the opportunity to meet in private to deliberate on the charge questions. The public meetings will end with the panel providing their initial comments and assessment, additional discussion with the presenters, and an opportunity for public comment. Written comments to the presenters are due to the Delta Science Program 30 days after the public meetings.

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